Research in International Business and Finance 36 (2016) 362–372

Contents lists available at ScienceDirect

Research in International Business and Finance

journal homepage: www.elsevier.com/locate/ribaf

Institutional arrangements and debt financing

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ARTICLE INFO

Article history:
Received 27 April 2015
Received in revised form
28 September 2015
Accepted 5 October 2015
Available online 22 October 2015

JEL classification:
G32
G33
F34
K20

Keywords:
Debt placement
Bond yield
Legal protection
Institutional arrangements

ABSTRACT

I find that institutional arrangements have an impact on the real economy by affecting firms' choice between private and public debt and the subsequent financing costs. Using new debt issued by firms in 26 non-US countries, I find, after controlling for firm characteristics predicted by debt agency and information asymmetry theories, that the level of financial market development, the efficiency of bankruptcy procedure, the integrity and enforceability of laws, and the transparency of financial information have significant impacts not only on firms' debt choice and yield to maturity in domestic debt market, but also their issuance choice in the international debt market.

1. Introduction

Debt is a major source of capital for firms worldwide. The extant literature finds that firms' debt placement choice (i.e., public vs. private debt) and debt financing costs are related to characteristics that reflect the firm's credit quality, debt agency problems, level of information asymmetry, and flotation costs (Cantillo and Wright, 2000; Denis and Mihov, 2003; Hadlock and James, 2002; Krishnaswami et al., 1999). The implicit assumption of these studies is that capital markets are competitive and perfectly elastic; hence, debt financing decisions reflect the outcomes when a firm solves an optimization problem based on its fundamentals (Baker, 2009). To the extent that external capital markets are not always fully efficient and perfectly competitive in many countries, firm debt financing patterns are likely to be affected by external constraints. Using a sample of firms located in 26 non-US countries from 1995 to 2008, I examine the effects of external institutional constraints on firm debt financing, above and beyond the effects of firm fundamentals.

A few papers have examined the effect of institutional arrangements on firms' capital structure (Booth et al., 2001; Demirguc-Kunt and Maksimovic, 1999; Fan et al., 2012). The focus of these papers is the effect of institutional arrangements on the aggregate amount of debt in a firm. This study contributes to the literature by examining firms' new debt issues instead.

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http://dx.doi.org/10.1016/j.ribaf.2015.10.006
0275-5319/

Specifically, I examine whether and how institutional arrangements systematically influence a firm's choice between public and private debt for new debt issuance.

I focus on the following institutional features: the level of economic and financial development, the extent and strength of creditors' legal protection, and the availability and transparency of financial information. I expect these institutional features to affect firm debt financing by altering the relative advantages and disadvantages of public and private debt. Three channels can be at work. First, the level of financial market development determines the availability of capital and the accessibility of different capital markets; this is a supply-side effect that strongly influences a firm's debt choice and the cost of debt. Second, the quality and strength of creditors' legal protection determine how effectively debt contracts can be enforced when a debt covenant violation occurs. They also determine the efficiency of the bankruptcy process, which can affect creditors' recovery rates. These two effects can alter a creditor's assessment of a firm's ex-ante bankruptcy risk. Third, the availability and transparency of corporate financial information is directly related to the level of information asymmetry, which influences both debt placement choice and financing costs.

Country-level institutional environment significantly affects firms' choice between public and private debt. Consistent with the first channel, I find that smaller banking sectors lead to a higher likelihood of issuing private placement bonds. This suggests that, when faced with a limited loan supply, firms without access to public debt will need to use private placement bonds as an alternative source of capital. Similarly, a large domestic equity market is associated with a low likelihood of public debt issuance, indicating a substitution effect between the two major public financing sources. The results are consistent with the findings in Graham and Harvey (2001) and Leary (2009) that the supply of different forms of capital has a significant impact on firms' capital structure and the mix of debt sources. The size of the insurance industry is positively and significantly associated with the likelihood of issuing public bonds, consistent with the idea that the development of the insurance industry is an indicator of economic growth and financial sector development (Beck and Webb, 2003; Fan et al., 2012).

I also find supportive evidence for the second channel. In countries with weak legal protection and enforcement, private placement bonds that allow investors to actively monitor managers and limit manager discretion are more likely to be issued. In contrast, when the legal system has strong control over managerial self-dealing and systematic corruption, the likelihood of issuing new debt publicly is higher. Moreover, I find that institutional arrangements in the domestic country can affect the sensitivity of the debt issuance choice to firms' information asymmetry. The choice of public versus private is less affected by firm tangibility in cases where the external legal system provides stronger protection to creditors.

The third channel suggests that financial transparency mitigates the information asymmetry between firms and outside creditors, and makes it less costly for firms to borrow from the public debt market. From this perspective, I expect that higher accounting standards and greater scope of credit information will raise the likelihood that a firm will issue public debt. However, the results only partially support this prediction.

Issuing debt in international capital markets has become an increasingly common practice in the last decade, especially after the creation of the euro and the subsequent rapid development of the Eurobond market. In fact, about 27 percent of bonds in the sample are placed internationally. The evidence indicates that a firm's ability to access to international debt markets is affected by the issuer's nationality. Firms from countries with highly developed capital markets, stronger creditor protection, and high-quality financial information are more likely to not only borrow in international debt markets but also issue international debt publicly. In contrast, firms from developing countries more often issue domestic debt. Also, private lending contracts are used more often in the international debt market when the issuer's domestic country has weak legal enforcement regarding managerial self-dealing.

Debt financing costs, calculated as the yield to maturity minus risk-free interest rate at the date of issuance, are also affected by the institutional environment. Higher GDP per capita, larger banking sector and equity market are associated with lower bond yields. Better creditor rights protection and more transparent financial information also reduce debt financing costs. Moreover, I find that the yield of public bonds is more heavily affected by institutional environment than that of private placement bonds.

This study is directly related to an emerging stream of literature exploring the supply-side effects of corporate financing and capital structure decisions. Greenwood and Vayanos (2013) and Graham et al. (2013) analyze the effect of monetary and fiscal policies on corporate capital structure. Leary and Roberts (2005) and Stohs and Mauer (1996) test the effect of interest rate on firms' capital structure decisions. Leary (2009) studies the effect of bank loan supply shocks on firms' capital structure and the mix of debt sources. This study suggests that institutional arrangements can affect the availability of funds in different capital markets and the investors' preference for different types of debt contracts, and in turn affect individual firms' choice between public and private debt.

This study is also closely related to a large body of literature that explores the economic impact of institutional factors, beginning with King and Levine (1993) and La Porta et al. (1997, 1998). Issues that have been studied include the effect of legal institutions on financial development (Djankov et al., 2008), corporate governance (Doidge et al., 2007), corporate investment (Ellis et al., 2012), capital structure (Booth et al., 2001; Fan et al., 2012; Arosa et al., 2014), and access to financing (Aggarwal and Goodell, 2014). This study adds to this literature by showing that institutional arrangements have a real impact on firm decisions when new debt is issued and that the external institutional environment significantly affects the choice between private and public debt, domestic versus international debt, and the financing costs associated with the new debt issuance.